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Ubiquitin C Terminal Hydrolase 1 (UCHL1) Antibody
Mouse monoclonal antibody
Catalog # AN1157

Specification

Ubiquitin C Terminal Hydrolase 1 (UCHL1) Antibody - Product Information

Application	**IF, WB**
Primary Accession	P09936
Reactivity	**Bovine, Human, Rat**
Host	**Mouse**
Clonality	**monoclonal**
Isotype	**IgG1**
Calculated MW	**24 KDa**

Ubiquitin C Terminal Hydrolase 1 (UCHL1) Antibody - Additional Information

Gene ID	**7345**
Gene Name	**UCHL1**

Other Names
Ubiquitin carboxyl-terminal hydrolase isozyme L1, UCH-L1, 6---, Neuron cytoplasmic protein 95, PGP 95, PGP95, Ubiquitin thioesterase L1, UCHL1

Target/Specificity
Recombinant full length human UCHL1 purified from E. coli.

Dilution
IF~~ 1:500
WB~~ 1:5000

Format
Unpurified, concentrated culture supernatant

Antibody Specificity
Specific for the ~24kDa UCHL1 protein.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Ubiquitin C Terminal Hydrolase 1 (UCHL1) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping
Blue Ice

Ubiquitin C Terminal Hydrolase 1 (UCHL1) Antibody - Protocols

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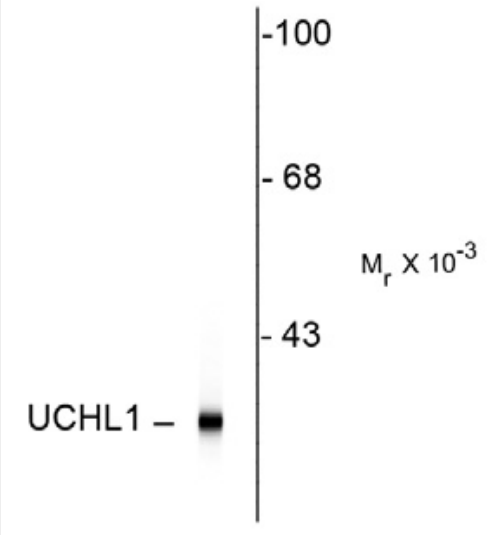
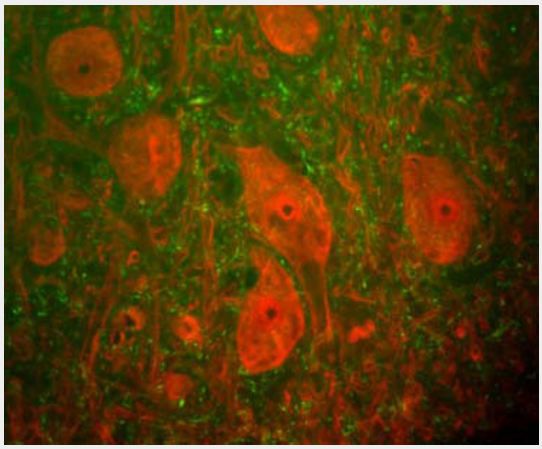
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Ubiquitin C Terminal Hydrolase 1 (UCHL1) Antibody - Images



Western blot of rat hippocampal homogenate showing specific immunolabeling ofthe ~ 24k UCHL1 protein.



Rat spinal cord stained with anti-UCHL1(red) and anti-neurofilament NF-H antibody (green). The large cells are α-motorneurons and UCHL1 fills the cytoplasm of their perikaryaand dendrites.

Ubiquitin C Terminal Hydrolase 1 (UCHL1) Antibody - Background

Ubiquitin C-terminal hydrolase 1 (UCHL1) is also known as ubiquitin carboxyl esterase L1, ubiquitin thiolesterase, neuron-specific protein PGP9.5 and Park5. It was originally identified as a major component of the neuronal cytoplasm from 2-dimensional gel analysis of brain tissues, and was given the name PGP9.5 (1). It was later found that ubiquitin C-terminal hydrolase enzyme activity

was associated with the PGP9.5 protein (2). The ubiquitin C-terminal hydrolases cleave ubiquitin from other molecules. Regulation of the ubiquitin pathway is very important and many disease states are associated with defects in this pathway. Genetic knockout of UCHL1 in mice results in a motor neuron degeneration similar to the spontaneous gracile axonal dystrophy (gad) mutant mice (3). Point mutations in the UCHL1 gene are associated with some forms of human Parkinson's disease (4). Since UCHL1 is heavily expressed in neurons, it is released in large amounts following injury or degeneration, so the detection of UCHL1 in CSF and other bodily fluids can be used as a biomarker.
Anti-UCHL1

Ubiquitin C Terminal Hydrolase 1 (UCHL1) Antibody - References

1. Doran JF, Jackson P, Kynoch PA, Thompson RJ. Isolation of PGP 9.5, a new human neurone-specific protein detected by high-resolution two-dimensional electrophoresis. J Neurochem. 40:1542-7 (1983).
2. Wilkinson KD, Lee KM, Deshpande S, Duerksen-Hughes P, Boss JM, Pohl J. The neuron-specific protein PGP 9.5 is a ubiquitin carboxyl-terminal hydrolase. Science. 1989 246:670-3 (1989).
3. Kurihara LJ, Kikuchi T, Wada K, Tilghman SM. Loss of Uch-L1 and Uch-L3 leads to neurodegeneration, posterior paralysis and dysphagia. Hum Mol Genet. 10:1963-70 (2001).
4. Liu Y, Fallon L, Lashuel HA, Liu Z, Lansbury PT Jr. The UCH-L1 gene encodes two opposing enzymatic activities that affect alpha-synuclein degradation and Parkinson's disease susceptibility. Cell 111:209-18 (2002).